

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/060295 A1

(51) International Patent Classification⁷: **H04Q 7/36**

(21) International Application Number:
PCT/SE2003/002047

(22) International Filing Date:
19 December 2003 (19.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): TELEFONAKTIEBOLAGET LM ERICSSON (publ)
[SE/SE]; S-164 83 Stockholm (SE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): CARLSSON, Roland
[SE/SE]; Skottvägen 3, S-433 50 Öjersjö (SE).

(74) Agent: ALBIHNS GÖTEBORG AB; Box 142, S-401 22
Göteborg (SE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

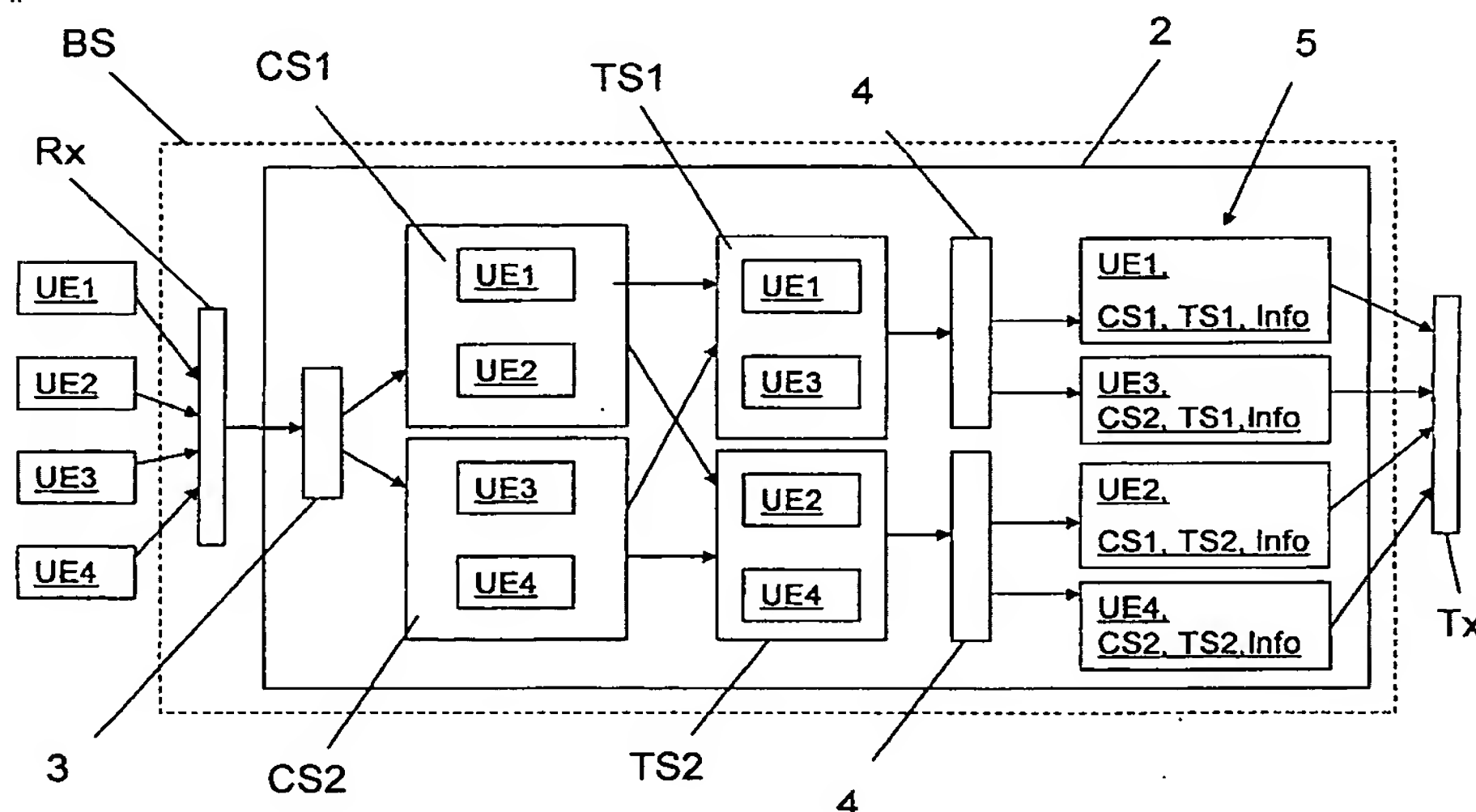
(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND ARRANGEMENT FOR MINIMIZING INTRACELL INTERFERENC IN A DATA TRANSMISSION SYSTEM



(57) Abstract: The invention refers to an arrangement and a method for minimizing intracell and/or intercell interference for a data transmission system comprising a scheduler (2). A first base station (BS) receives information from user equipments (UE1-UE4) in a first cell (1), by means of a first antenna system (Rx, Tx). The scheduler (2) identifies the position of each user is and allots a first time slot (TS1) to at least one user equipment (UE1) in a first cell segment (CS1) in the first cell (1). The scheduler (2) also allots the first time slot to at least one user (UE3) equipment in a second cell segment (CS2) in the first cell (1). The antenna system (Rx, Tx) then sends information from the base station (BS) simultaneously to all user equipments (UE1, UE3) allotted to the first time slot.